

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.15**SOURCE INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-002298**Date Inspected:** 08-Dec-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**Location:** Changxing Dao, Shanghai**Quality Control Contact:** William (Bill) Oak**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:** Coating Inspection**Bridge No:** 34-0006**Component:** Lift 3West, Lift 3East,, Lift 4 West, Lift 4 We**Bid Item:** 77, 78, 79**Lot No:** B265**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials (OSM) Quality Assurance (QA) NACE III coating inspector, Mr. James Lumley arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island in Shanghai, China. The purpose of the coating inspections are to monitor the surface preparation and coating applications for the SAS Bay Bridge project. This QA NACE III coating inspector observed the following:

Office

Report writing and project documentation and sorting of files.

Lift 2 East

Top-coated external surfaces on the East Side Plate coated on 12-7-09 which were deemed non-compliant with the contract documents and were re-sprayed with Interfine 979 Finish Coat to achieve desired uniform gloss and appearance were re-inspected jointly with Caltrans Engineer Bill Howe, Caltrans QA Lumley, and ABF Coatings QA Superintendent Bill Oak and were found to be in general compliance with the contract documents at the time of inspection on this date.

Lift 1 East

Top-coat Interfine 979 was applied today to external surfaces at approximately 06:00 AM. A joint visual inspection was conducted with Caltrans QA Lumley Caltrans Engineer Bill Howe and ABF QA Bill Oak and the top-coated surfaces exhibited non-uniform gloss and appearance, shadow through, holidays and overspray on areas of the external surfaces. Top-Coat application was not in general compliance with the contract documents and repairs are required to amend.

Cross Beam #2

Upper and Lower weld repair areas on the external Side Plate to Bottom Plate and Top Plate to Side Plate Longitudinal weld seam were checked for Dry Film Thickness (DFT) of applied Undercoat and found to be in

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excess of 400um in localized areas. ZPMC is to amend prior to application of Finish Coat Interfine 979. ZPMC was delayed in the application of coatings as ambient conditions were non-compliant with the contract documents and the published manufacturer's product data sheets until the afternoon.

### Lift 2 West

External previously "Mist" coated surfaces were in process of being cleaned and prepared in accordance with SSPC SP-1&2 of the "F" Side Plate, East and West Side Plates and the FL-3 Beam. ZPMC currently in process of performing preparation of the Top Plate to "F" Side Plate weld seam repairs utilizing power tools Rotary Abrasive Disc followed by SSPC SP-1. Caltrans QA Lumley informed ASMR Skyler Guest that the Incident Report for the Suspender Bracket Faying surface was removed and the Faying surface now has the specified undercoat upon the surface.

### Lift 3 East

ZPMC requested "Final" inspection of NDT repair areas of Transverse weld repairs on the Side Plate which were Top-coated previously with Interfine 979. Work exhibited non-compliant issues due to ZPMC failing to ensure that all areas which were damaged were completely top-coated. The areas exhibited abrasion damages from sanding operations that were not over-coated with Top-coat. ZPMC "masked" the areas off too narrowly to ensure encapsulation of all areas required.

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### Lift 4 East

ZPMC requested "Final" inspection of NDT repair areas of Transverse weld repairs on the Side Plate which were Top-coated previously with Interfine 979. Work exhibited non-compliant issues due to ZPMC failing to ensure that all areas which were damaged were completely top-coated. The areas exhibited abrasion damages from sanding operations that were not over-coated with Top-coat. ZPMC "masked" the areas off too narrowly to ensure encapsulation of all areas which required repairs.

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### OBG 7BW

External Base Metal surfaces were abrasive blasted for VT inspection and verification of welds and Base Metal defects. Grinding operations followed to remove typical sharp edges, hackles, burrs and fins. Caltrans QA Tim McClendon performed VT inspection and mapped areas accordingly.

### Office

Attend to review and signing of Notices of Inspection and backlog of ZPMC QC inspection reports.

Note: All inspections were performed jointly with ABF & ZPMC QA/QC representatives and Caltrans QA Lumley when achievable. International Protective Coatings technical service representative were available for inspections and consultation.

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### Summary of Conversations:

Caltrans QA Lumley inquired with ABF QA Bill Oak as to why no Notice of Inspections were sent by ZPMC for any work/repairs associated with Lift 4 East since loaded upon the ship.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang (858) 699-9549, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Lumley,James	Quality Assurance Inspector
<b>Reviewed By:</b>	Peterson,Art	QA Reviewer

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